CLAIMS:

1. A data processing apparatus for performing a predetermined predictive calculation on input data using a predictive coefficient, comprising:

first storing means for storing a first predictive coefficient obtained by learning;

instructing means for instructing conversion of the first predictive coefficient; and

first calculating means for calculating a second predictive coefficient from the first predictive coefficient according to a predetermined transform method when conversion is instructed by said instructing means.

2. The data processing apparatus according to Claim 1, wherein the first calculating means calculates and outputs the second predictive coefficient when conversion is instructed by the instructing means, and outputs the first predictive coefficient without calculation of the second predictive coefficient when conversion is not instructed by the instructing means.

3. The data processing apparatus, according to Claim 2, further comprising:

a second storing means for storing the first predictive coefficient or second predictive coefficient output from the first calculating means.

4. The data processing apparatus according to Claim 3, further comprising:

a first extracting means for extracting from the input data first data;

a determining means responsive to the first extracting means for determining a class based on the first data;

a second extracting means for extracting second data calculated from the input data; and

a third calculating means for calculating output data based on the second data extracted by the second extracting means and the first predictive coefficient or second predictive coefficient stored by the second storing means,

wherein the second storing means supplies the first predictive coefficient or second predictive coefficient corresponding to the class determined by the determining means to the third calculating means.

5 5. The data processing apparatus according to Claim 4, wherein the first predictive coefficient is a predictive coefficient determined for each class based on third data serving as a student signal corresponding to the input data, and fourth data serving as a teacher signal corresponding to the output data.

10 6. The data processing apparatus according to Claim 4, wherein the input data comprises composite signal data, and the output data comprises component signal data defined as data obtained by converting the component signal data according to the predetermined transform method.

15 7. The data processing apparatus according to Claim 4, further comprising decoding means for selecting data input and the output data generated by the third calculating means and for decoding the selected data input.

8. The data processing apparatus according to Claim 1, wherein the instructing means
20 designates the transform method, and

the first calculating means calculates the second predictive coefficient from the first predictive coefficient stored by the first storing means according to the transform method instructed by the instructing means.

25 9. The data processing apparatus according to Claim 8, wherein the first calculating means includes a third storing means for storing a transform formula corresponding to the transform method and for selecting the transform formula according to the transform method designated by the instructing means, and calculates the second predictive coefficient from the

first predictive coefficient based on the transform formula stored by the third storing means.

10. The data processing apparatus according to Claim 9, wherein the third storing means stores a transform formula corresponding to an orthogonal transform as the transform formula corresponding to the transform method.

11. A data processing apparatus for performing a predetermined predictive calculation on input data using a predictive coefficient, comprising:

a first memory for storing a first predictive coefficient obtained by learning;

a designation unit configured to instruct conversion of the first predictive coefficient; and

a coefficient calculation unit configured to calculate a second predictive coefficient from the first predictive coefficient according to a predetermined transform method when conversion is instructed by the designation unit.

12. The data processing apparatus according to Claim 11, wherein the first coefficient calculation unit calculates and outputs the second predictive coefficient when conversion is instructed by the designation unit, and outputs the first predictive coefficient without calculation of the second predictive coefficient when conversion is not instructed by the designation unit.

13. The data processing apparatus, according to Claim 12, further comprising:

a second memory for storing the first predictive coefficient or second predictive coefficient output from the coefficient calculation unit.

14. The data processing apparatus according to Claim 13, further comprising:

a first extraction unit for extracting from the input data, first data;

a classification unit responsive to the first extracting means for determining a class

based on the first data;

a second extraction unit for extracting second data calculated from the input data; and

a predictive calculation unit configured to calculate output data based on the second data extracted by the second extraction unit and the first predictive coefficient or second

5   predictive coefficient stored by the second memory,

wherein the second memory supplies the first predictive coefficient or second predictive coefficient corresponding to the class determined by the classification unit to the predictive calculation unit.

10   15.   The data processing apparatus according to Claim 14, wherein the first predictive coefficient is a predictive coefficient determined for each class based on third data serving as a student signal corresponding to the input data, and fourth data serving as a teacher signal corresponding to the output data.

15   16.   The data processing apparatus according to Claim 14, wherein the input data comprises composite signal data, and the output data comprises component signal data or data obtained by converting the component signal data according to the predetermined transform method.

20   17.   The data processing apparatus according to Claim 14, further comprising a decoder for selecting data input, and the output data generated by the predictive calculation unit and for decoding the selected data input.

18.   The data processing apparatus according to Claim 11, wherein the designation

25   unit designates the transform method, and

the coefficient calculation unit calculates the second predictive coefficient from the first predictive coefficient stored by the first memory according to the transform method instructed by the instructing means.

19. The data processing apparatus according to Claim 18, wherein the first coefficient calculation unit includes a third memory for storing a transform formula corresponding to the transform method and for selecting the transform formula according to the transform method designated by the designation unit, and calculates the second predictive coefficient from the first predictive coefficient based on the transform formula stored by the third memory.

20. The data processing apparatus according to Claim 19, wherein the third memory stores a transform formula corresponding to an orthogonal transform as the transform formula corresponding to the transform method.

21. A data processing method for a data processing apparatus for performing a predetermined predictive calculation on input data using a predictive coefficient, comprising:

storing a first predictive coefficient obtained by kerning instructing conversion of the first predictive coefficient; and

calculating a second predictive coefficient from the stored first predictive coefficient according to a the predetermined transform method when conversion is instructed in said instructing step.

22. A computer readable carrier including computer program instructions that cause a computer to perform a predetermined predictive calculation on input data using a predictive coefficient, the program comprising:

storing a first predictive coefficient obtained by learning;

instructing conversion of a the first predictive coefficient which is stored and which is obtained by learning; and

calculating a the second predictive coefficient from the stored first predictive coefficient according to a predetermined transform method when conversion is instructed in said instructing step.

23. A program for performing a predetermined predictive calculation on input data using a predictive coefficient, said program causing a computer to execute:

storing a first predictive coefficient obtained by learning;

5   instructing conversion of a the first predictive coefficient which is stored and which is obtained by learning; and

calculating a the second predictive coefficient from the stored first predictive coefficient according to a predetermined transform method when conversion is instructed in said instructing step.

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